Lecture 5: Interfaces; Surveys; Internationalization

CMSC 25900 / DATA 25900

Spring 2021

The University of Chicago

THE UNIVERSITY OF CHICAGO

Leftovers from Lecture 4:

Survey design

Overall survey considerations

- How do we distribute it?
- How long should it be?
- One-time survey? Longitudinal survey?
- Will you use personalized data?
- What will participants learn?
  - What can we randomize to minimize this?
- Can we **randomize** the questions / answer choices?

Are all answer options covered?

- With whom do you regularly share Facebook posts?
  - Family
  - Friends
- Allow multiple answers?
- Include “other” option (write-in)?
- Do we care about previous use?

Are all answer options covered?

- I connect to Facebook over HTTPS
  - True
  - False
- What about “I don’t know”?

Are we biasing the answer?

- Strangers seeing your Facebook posts would cause you grave privacy concern.
  - Strongly agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly disagree

How will responses be distributed?

- For how long have you had Facebook?
  - Less than one day
  - Between one day and one week
  - More than one week

Should we force an answer?

- What gender are you? (* required)
  -Female -Male
- What gender are you?
  -Female -Male -I prefer not to answer
- With what gender do you identify?
  -Female
  -Male
  -Non-binary
  -I prefer to self-describe___
  -I prefer not to answer

Likert-scale data?

- Respond to the following statement: Companies collect too much private data.
  - 7: Strongly agree
  - 6: Agree
  - 5: Somewhat agree
  - 4: Neutral
  - 3: Somewhat disagree
  - 2: Disagree
  - 1: Strongly disagree

Likert-scale data?

- I feel that companies collect too much private data.
  - 7: Strongly agree
  - 6: Agree
  - 5: Somewhat agree
  - 4: Neutral
  - 3: Somewhat disagree
  - 2: Disagree
  - 1: Strongly disagree

What demographics do we collect?

- Tech expertise, age, domain knowledge, gender, location, employment, etc.
- Don’t ask people to self-rate expertise
  - Ask questions with concrete answers
  - e.g., Have you earned a degree in, or held a job in, computer science?
  - Include a knowledge test if you want to know about expertise
- Consider why you are collecting this info

Leftovers from Lecture 1:

Is the status of a system apparent?

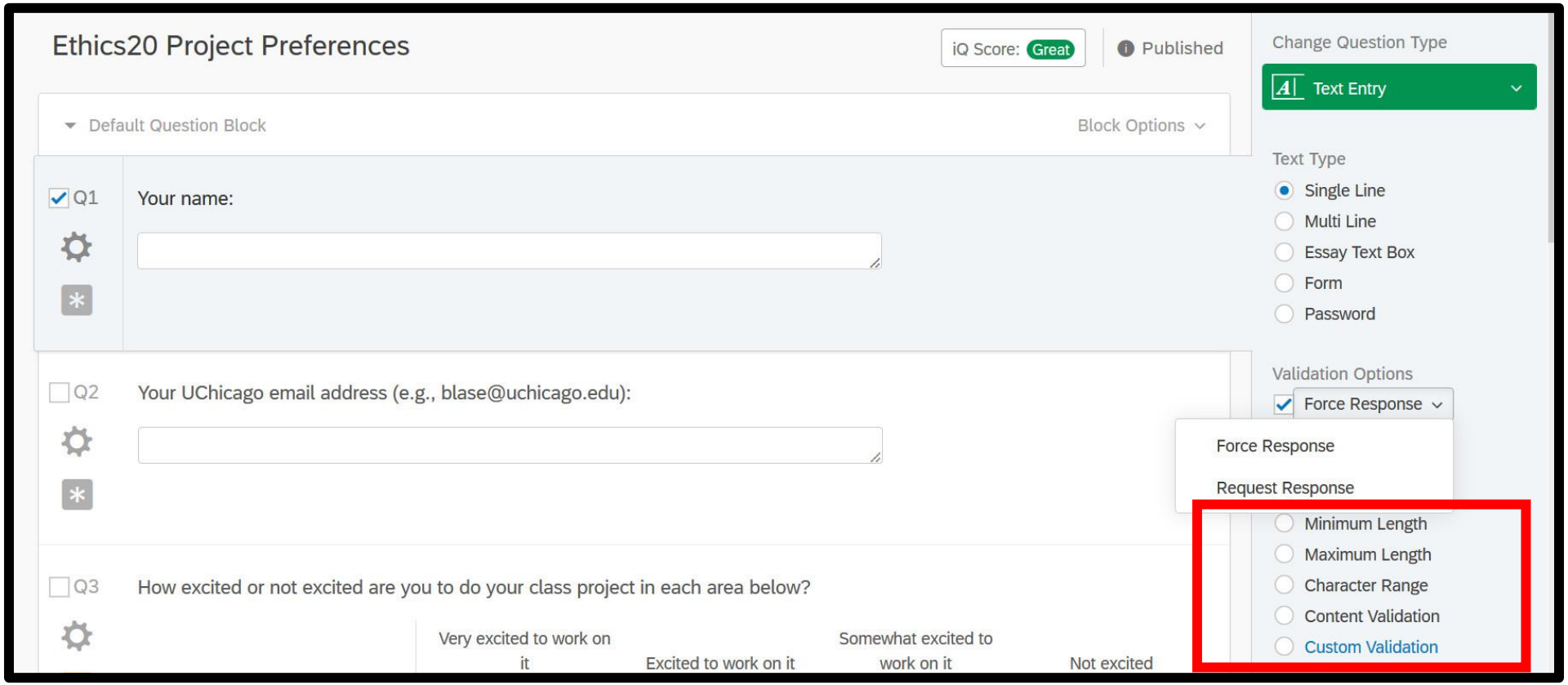
Making system status apparent

- Zoom: “This meeting is being recorded”
- Snapchat: Message disappear (is this true?)
- Match and other dating sites show inactive profiles
- Does a system make transparent where data is stored?
- Lights on a webcam
- Whatever a Nest thermostat is doing

Interfaces and data diversity

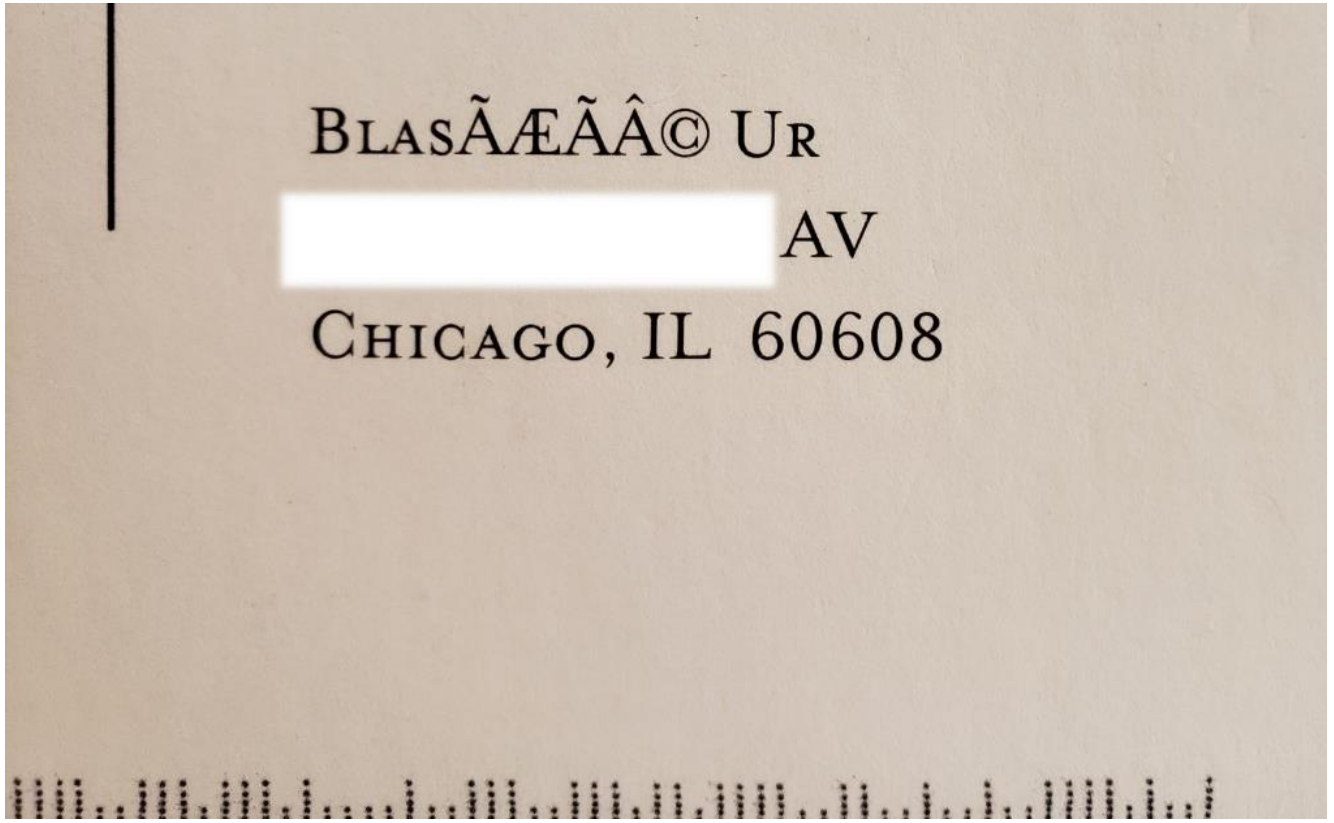
Data validation

- Are we considering all possible formats of the data?
- Are we forcing one answer when more than one applies?



Data validation

- Are we properly surfacing data errors?



Interfaces forcing an identity

- Facebook required a binary gender upon initial registration

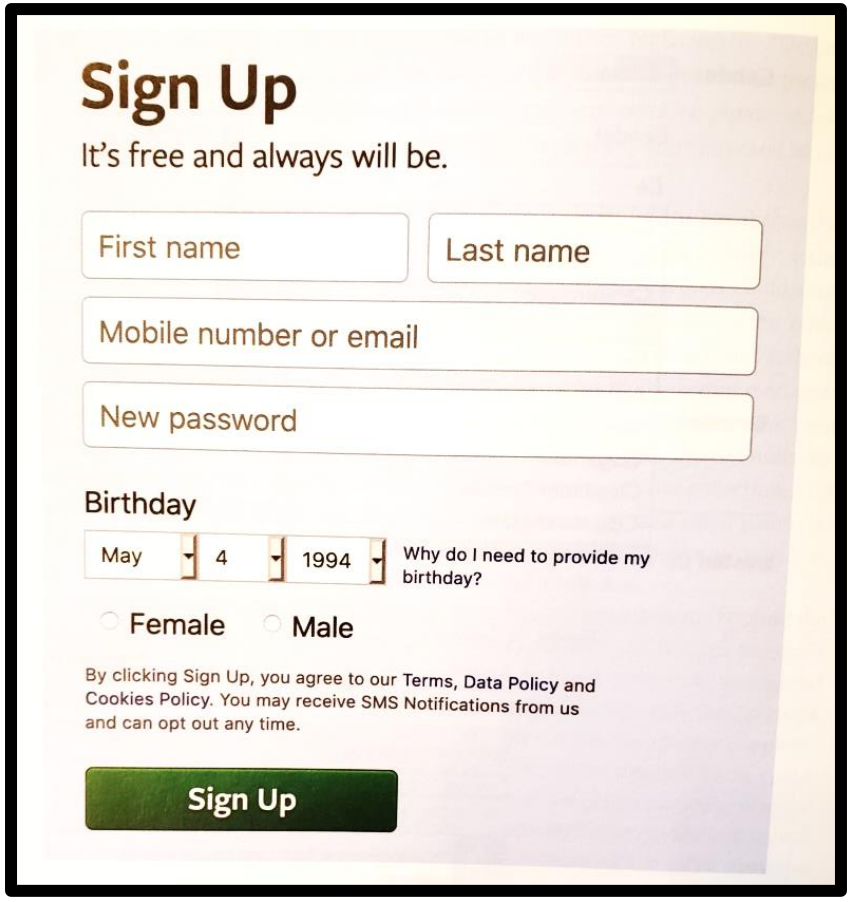


Image taken from: Catherine D'Ignazio and Lauren F. Klein, *Data Feminism*, The MIT Press, 2020

Facebook's first attempt to do better

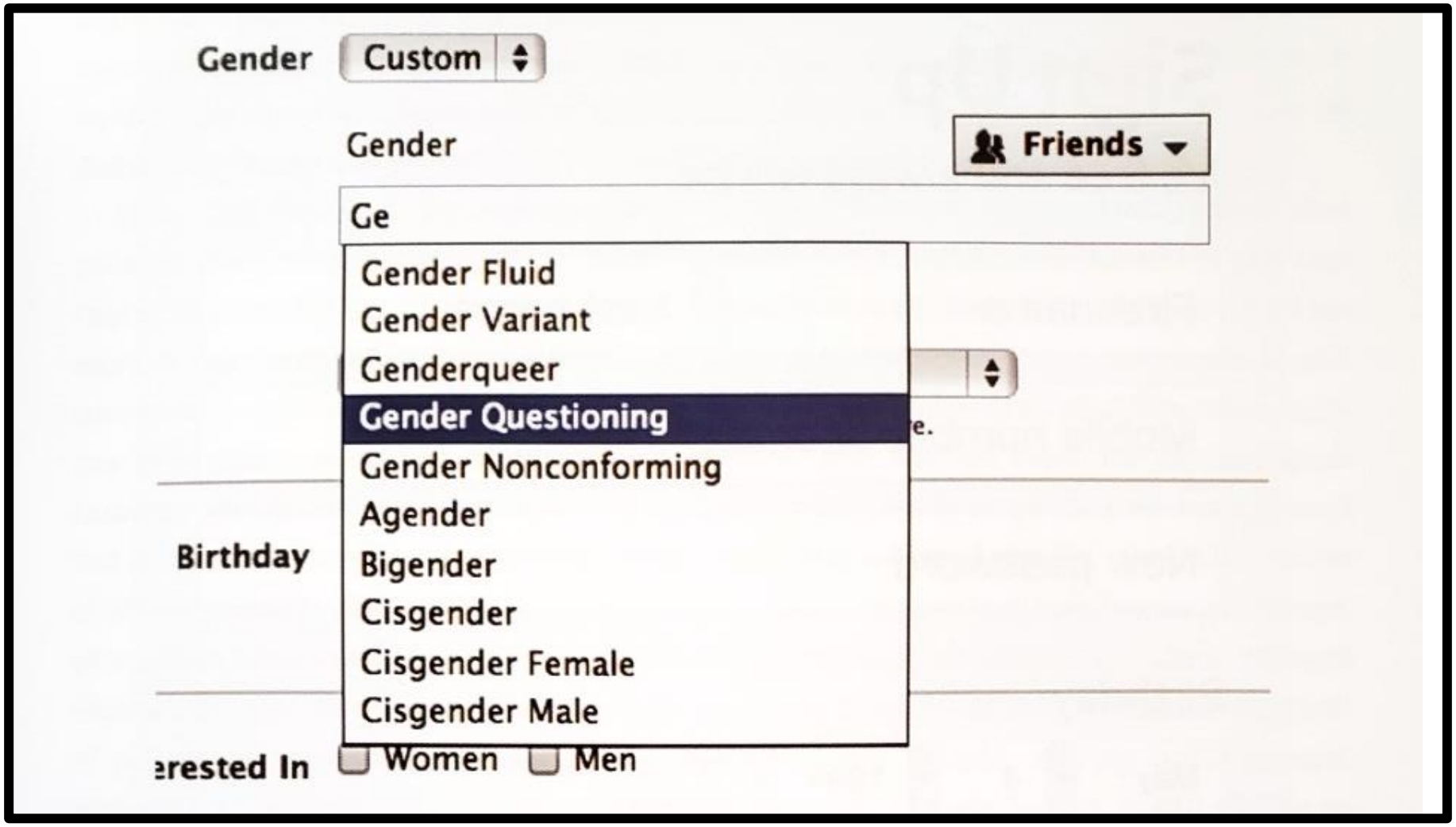


Image taken from: Catherine D'Ignazio and Lauren F. Klein, *Data Feminism*, The MIT Press, 2020

Facebook's improved attempt (free text)

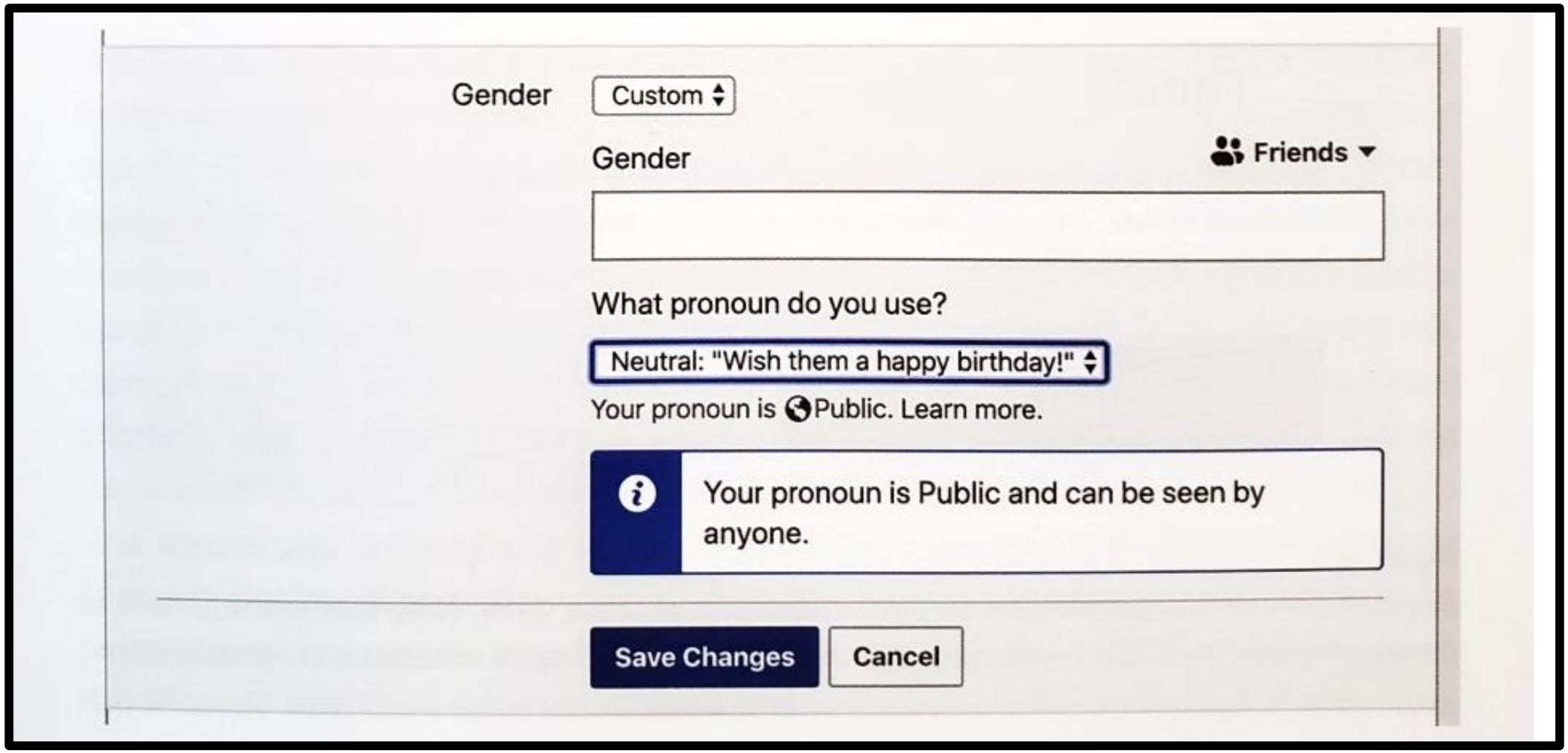
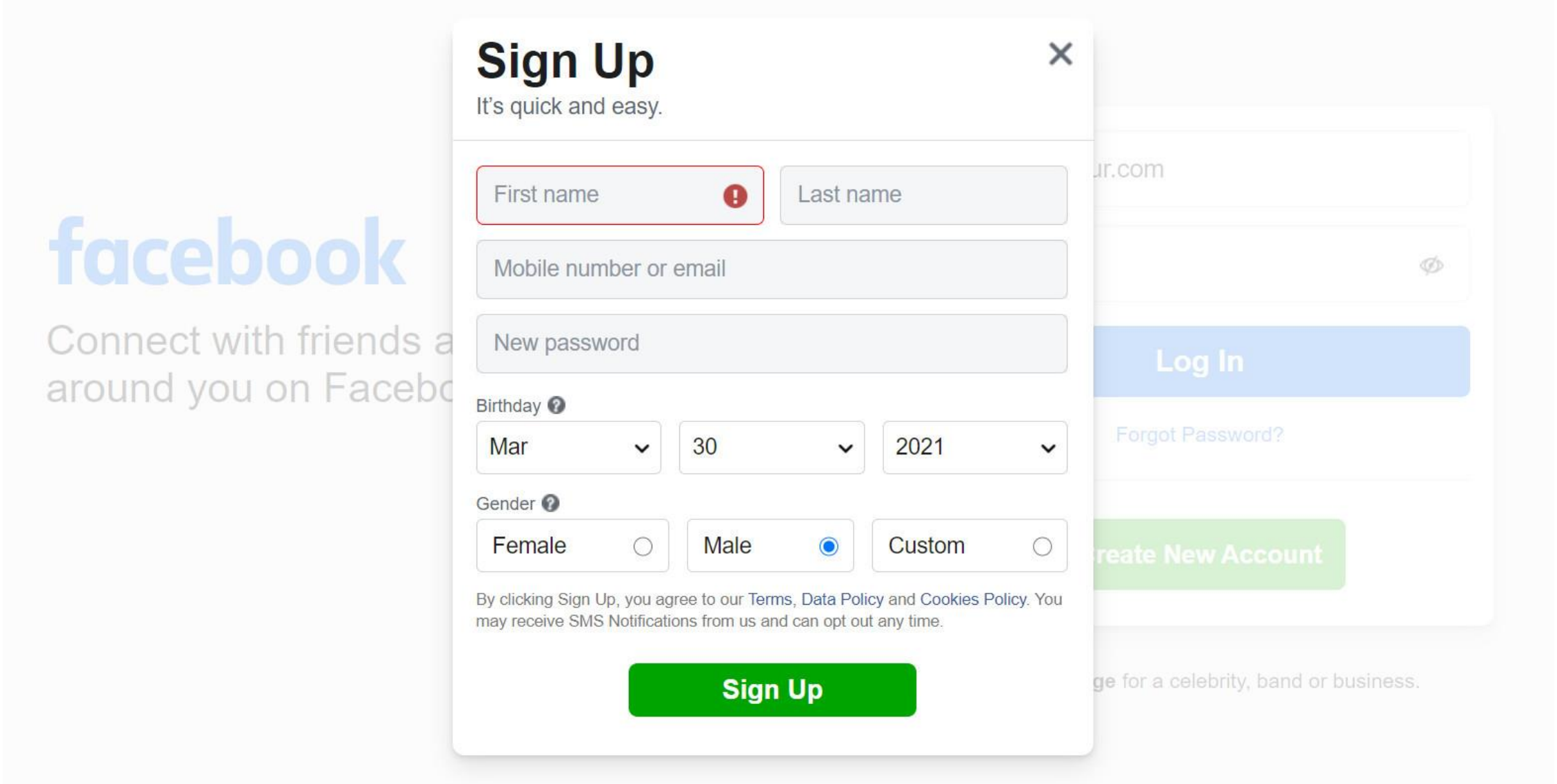


Image taken from: Catherine D'Ignazio and Lauren F. Klein, *Data Feminism*, The MIT Press, 2020

Facebook’s current registration interface



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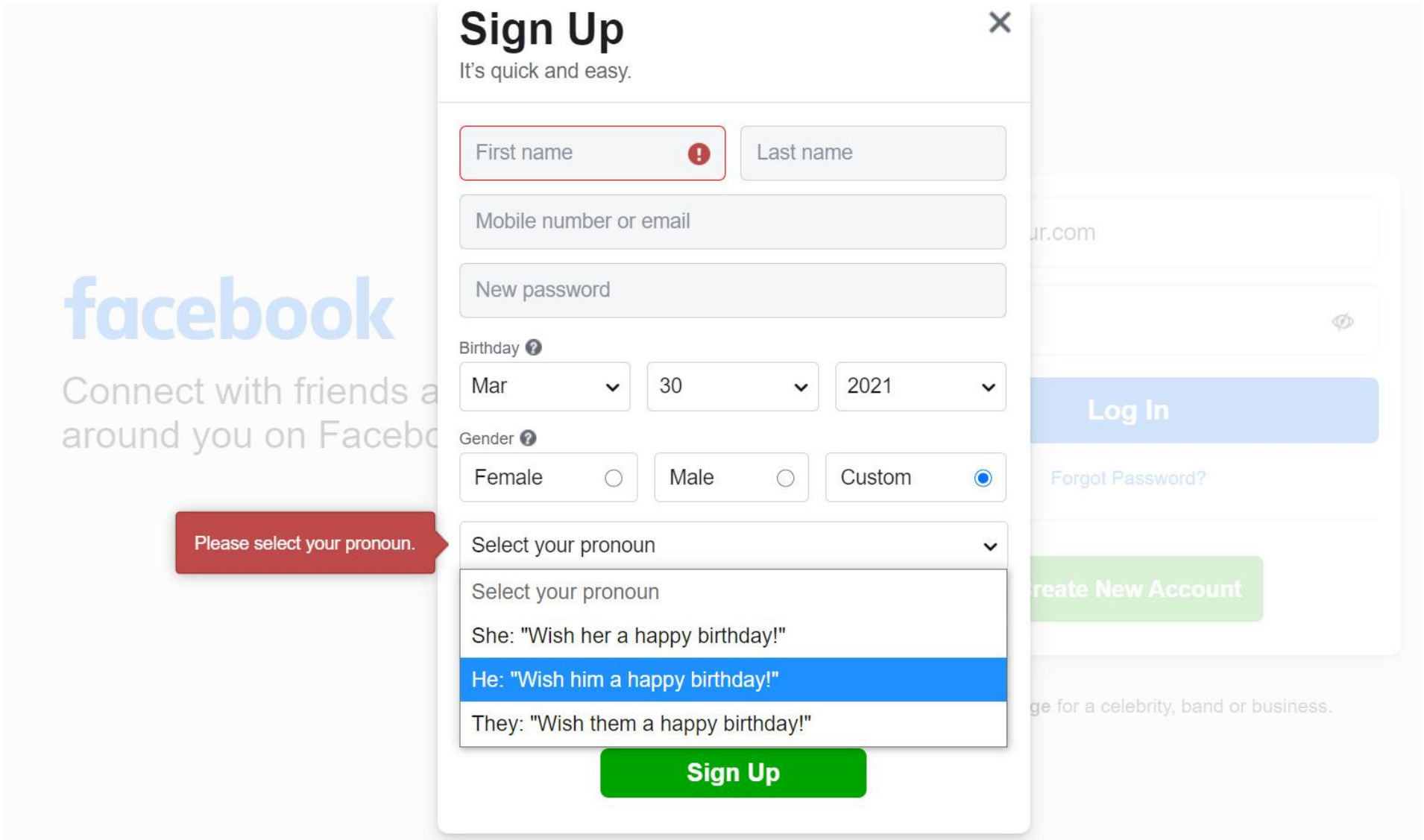

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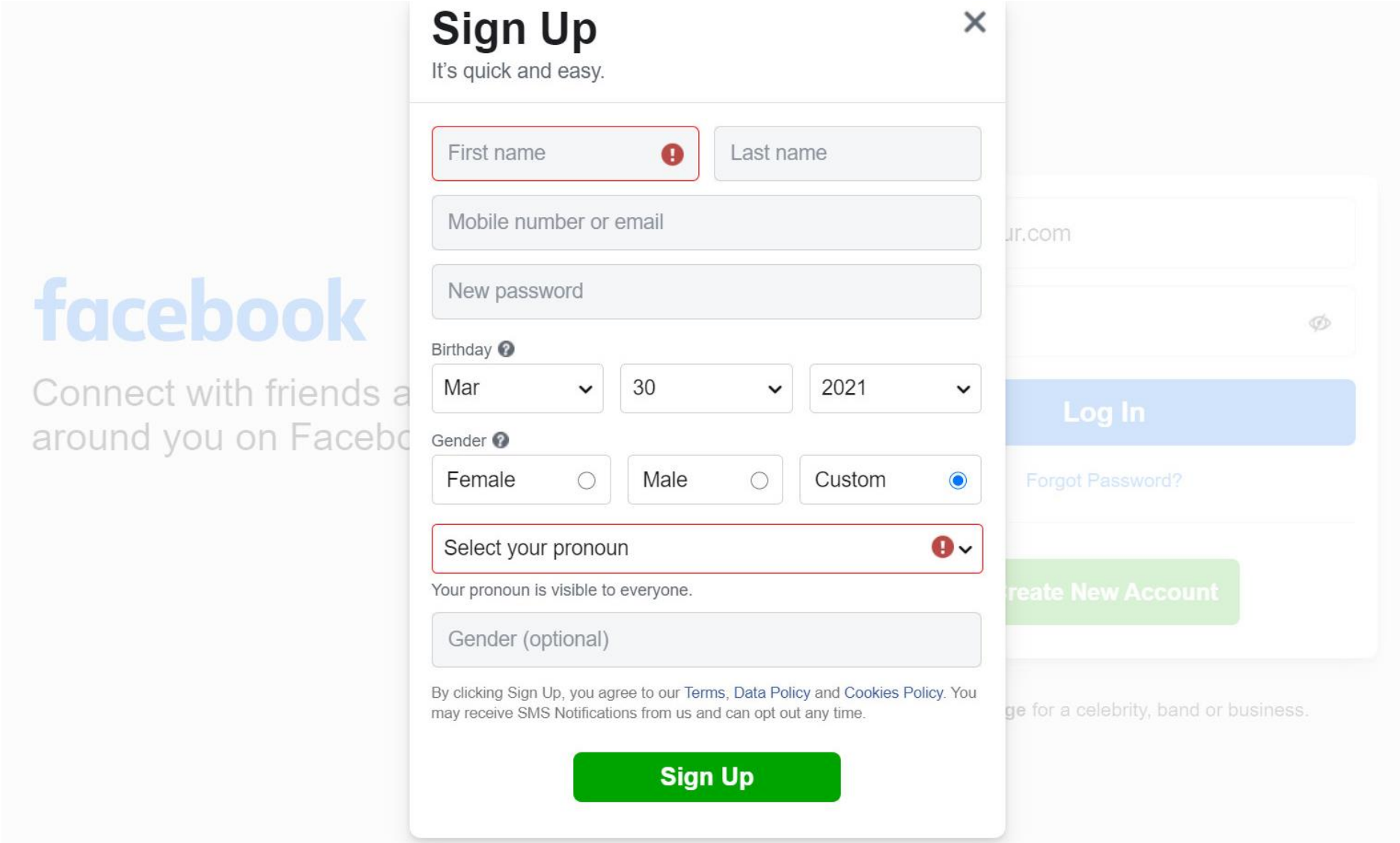
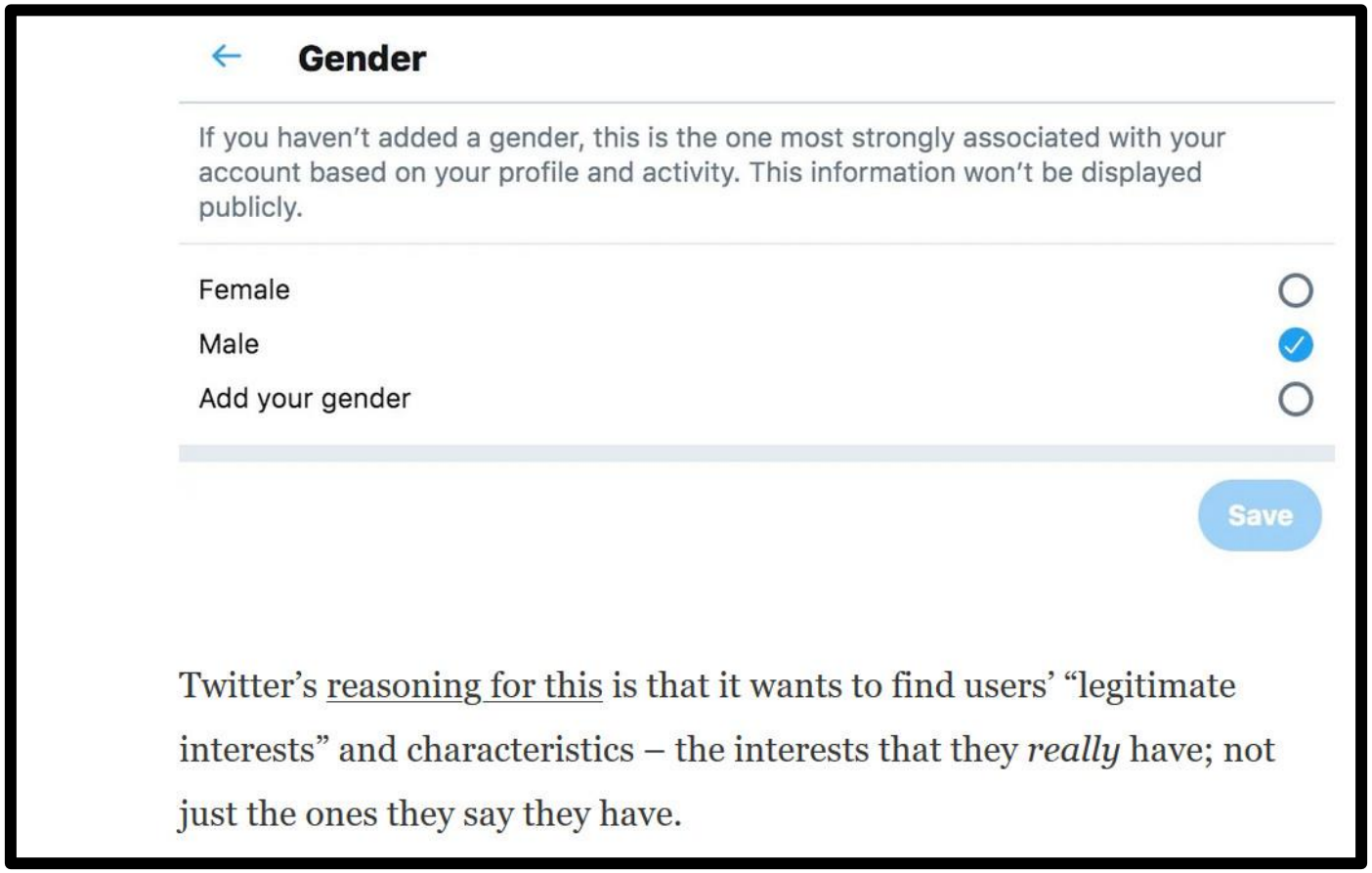


Inferring identity

- Twitter *guesses* your gender if you don't provide it
  - From: https://reclaimthenet.org/twitter-assumes-gender-ads



Who can access data in an interface?

Data access

- Slack: administrators *can* delete others' public messages
- Slack: administrators *cannot* access direct messages
- Zoom: administrators can request people unmute / turn on video
- Zoom: participants visible in meeting, but not in webcast
- Zoom: administrators can (retroactively) see participant times
- Unix OS: administrators can see everything

Stopping abuse

Anti-abuse

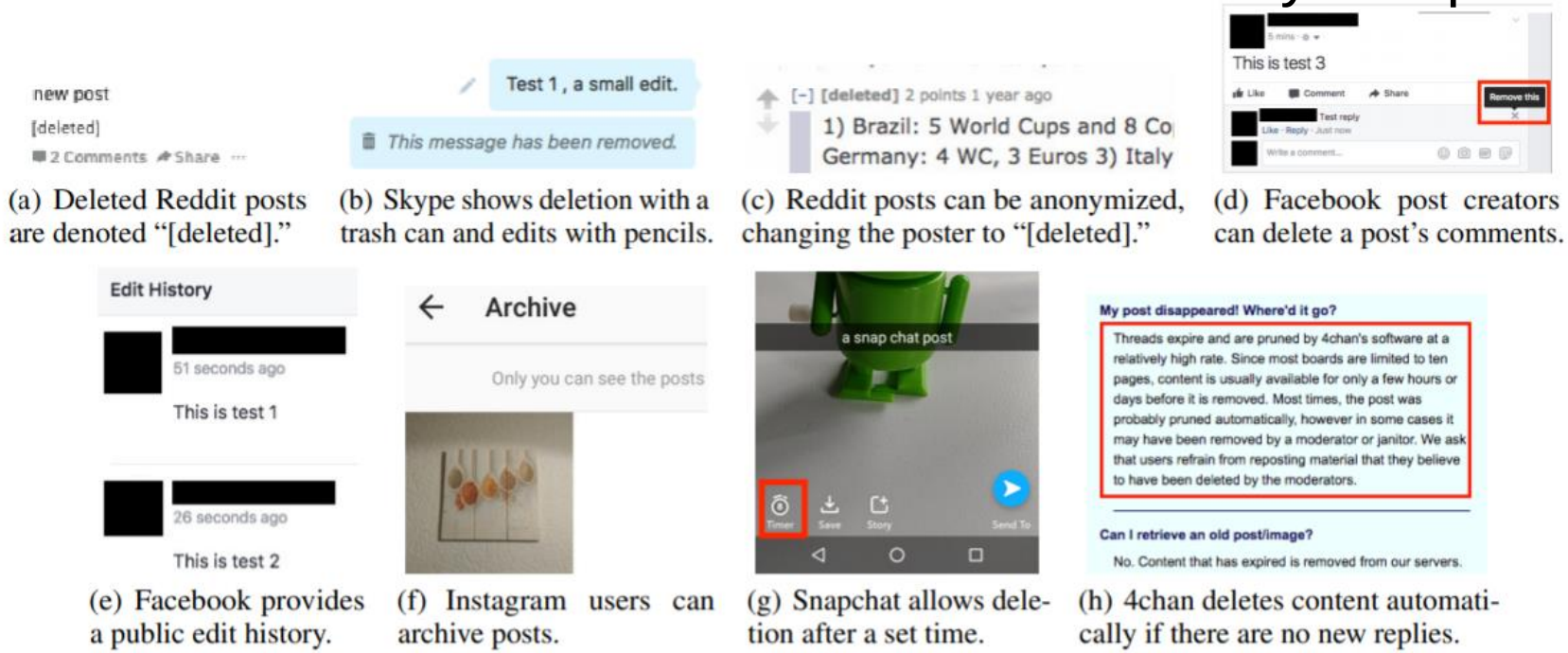
- Who chooses to block people?
  - On many sites, users can block others
  - Slack doesn’t let a user block another

Retrospective editing

- Can you change what you've said in a platform after the fact?
  - Is there a marker? How do we balance accountability and privacy?

Retrospective editing

- Can you change what you've said in a platform after the fact?
  - Is there a marker? How do we balance accountability and privacy?



(a) Deleted Reddit posts are denoted "[deleted]."
(b) Skype shows deletion with a trash can and edits with pencils.
(c) Reddit posts can be anonymized, changing the poster to "[deleted]."
(d) Facebook post creators can delete a post's comments.
(e) Facebook provides a public edit history.
(f) Instagram users can archive posts.
(g) Snapchat allows deletion after a set time.
(h) 4chan deletes content automatically if there are no new replies.

Figure 1: Example retrospective mechanisms and their associated markers as currently deployed on popular platforms.

Image taken from: Günce Su Yılmaz, Fiona Gasaway, Blase Ur, Mainack Mondal. Perceptions of Retrospective Edits, Changes, and Deletion on Social Media. In *Proc. ICWSM*, 2021

What are your goals?
What are your responsibilities?
(Business vs. user goals)

New content:

Accessibility

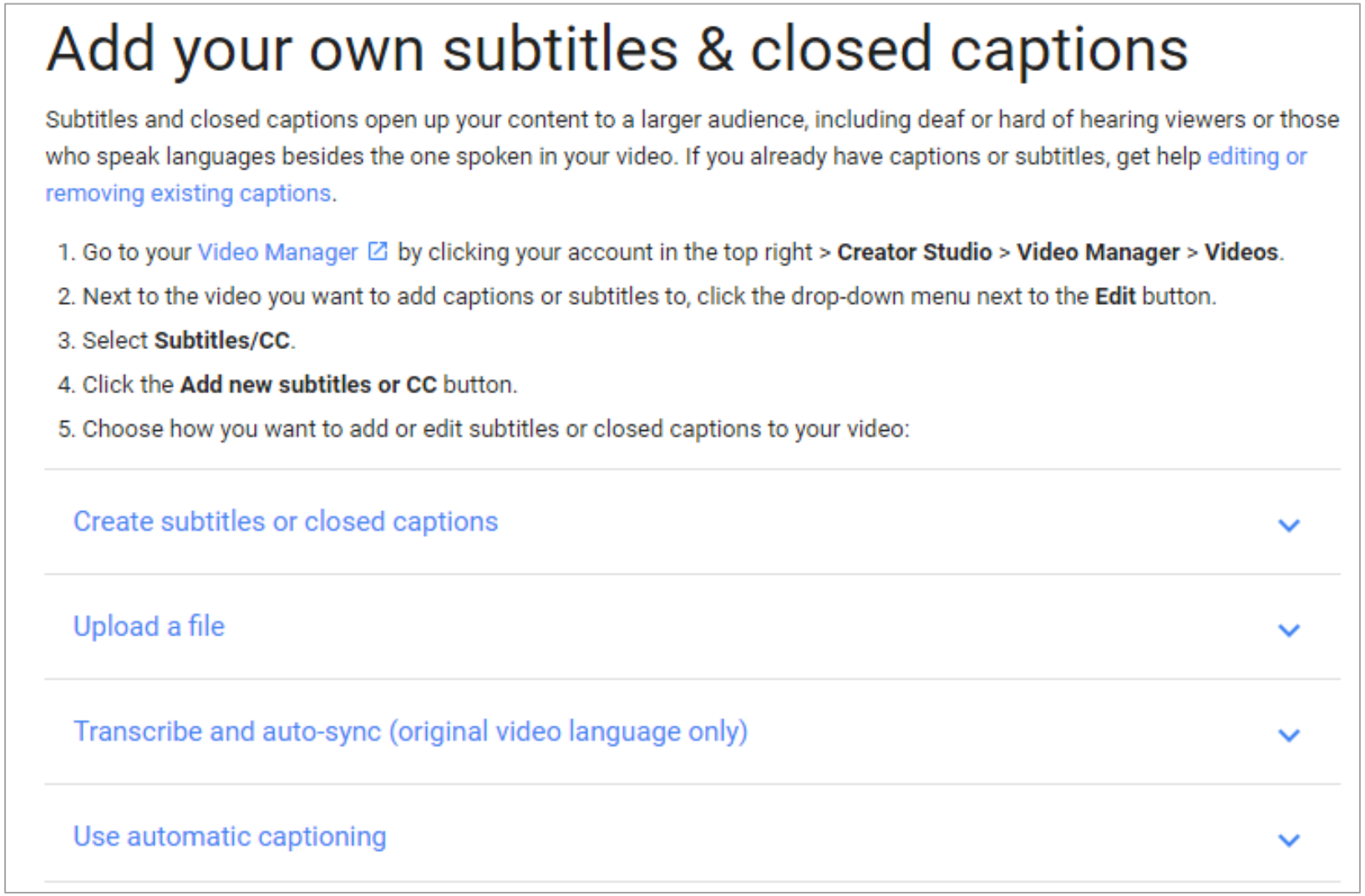
Crucial considerations

- Cognitive impairments
  - Illiteracy
  - Memory difficulties
- Visual impairments
  - Sightedness
  - Color-blindness
- Dexterity impairments
- Hearing impairments

The importance of “alt” text

-
- This is what screen readers use!

The importance of video captions



Add your own subtitles & closed captions

Subtitles and closed captions open up your content to a larger audience, including deaf or hard of hearing viewers or those who speak languages besides the one spoken in your video. If you already have captions or subtitles, get help editing or removing existing captions.

1. Go to your Video Manager by clicking your account in the top right > **Creator Studio** > **Video Manager** > **Videos**.
2. Next to the video you want to add captions or subtitles to, click the drop-down menu next to the **Edit** button.
3. Select **Subtitles/CC**.
4. Click the **Add new subtitles or CC** button.
5. Choose how you want to add or edit subtitles or closed captions to your video:

Create subtitles or closed captions

Upload a file

Transcribe and auto-sync (original video language only)

Use automatic captioning

The importance of fonts and text

- Websites / apps should still work when magnified to a large size
- Don’t use color to convey meaning
  - Screen readers do not interpret it
- High-contrast color combinations
- Don’t include placeholders in form fields
- Make form fields easy to find

Readability

- Standard metrics for the grade level of text
- https://en.wikipedia.org/wiki/Readability#Popular_readability_formulas
- https://www.online-utility.org/english/readability_test_and_improve.jsp

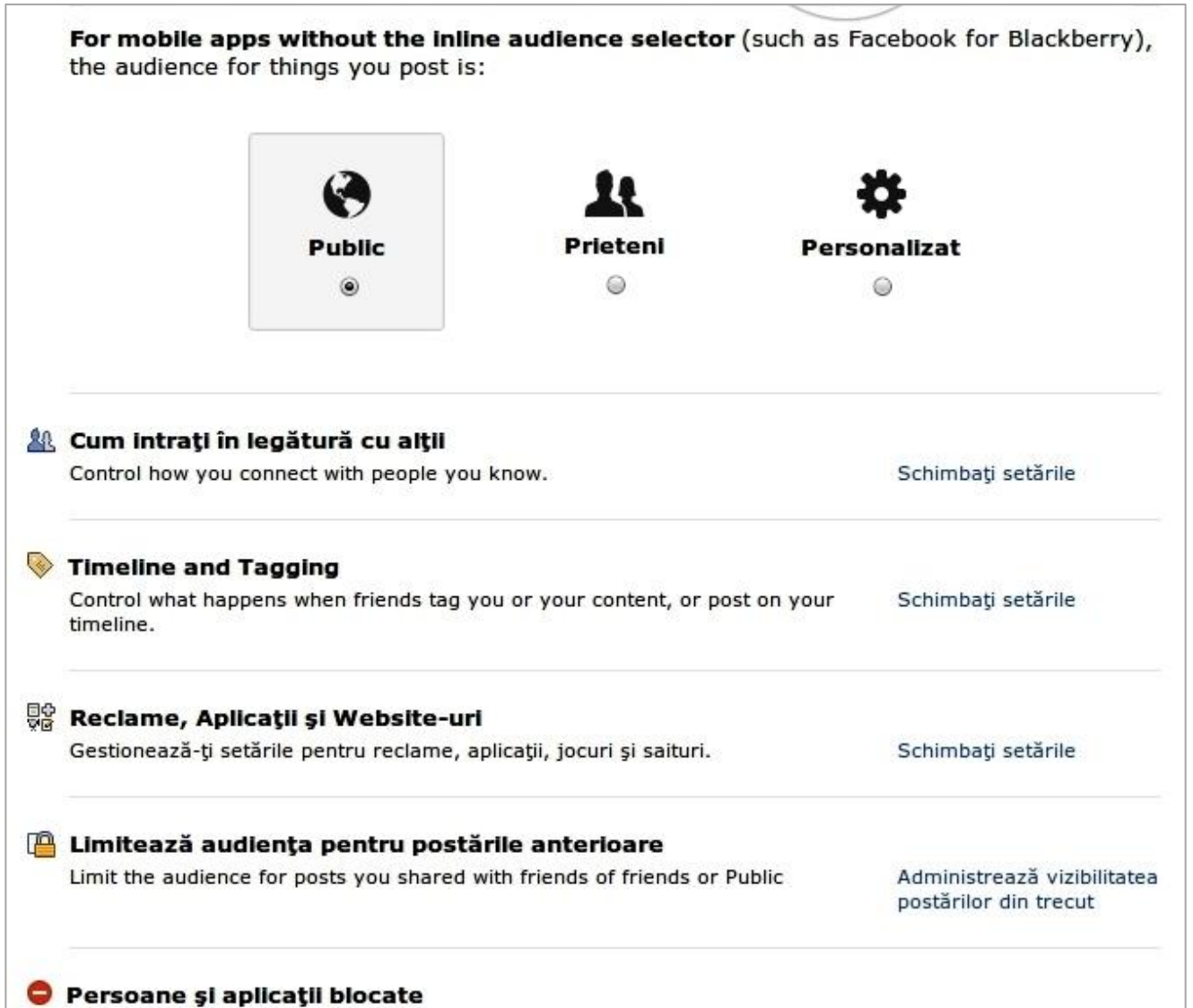
Conducting accessibility studies

- Follow accessibility guidelines: https://developer.gnome.org/accessibility-devel-guide/stable/gad-ui-guidelines.html.en
- Don’t forget to user test with **diverse** populations that accurately reflect **all** users
- https://www.youtube.com/watch?v=t4DT3tQqgRM

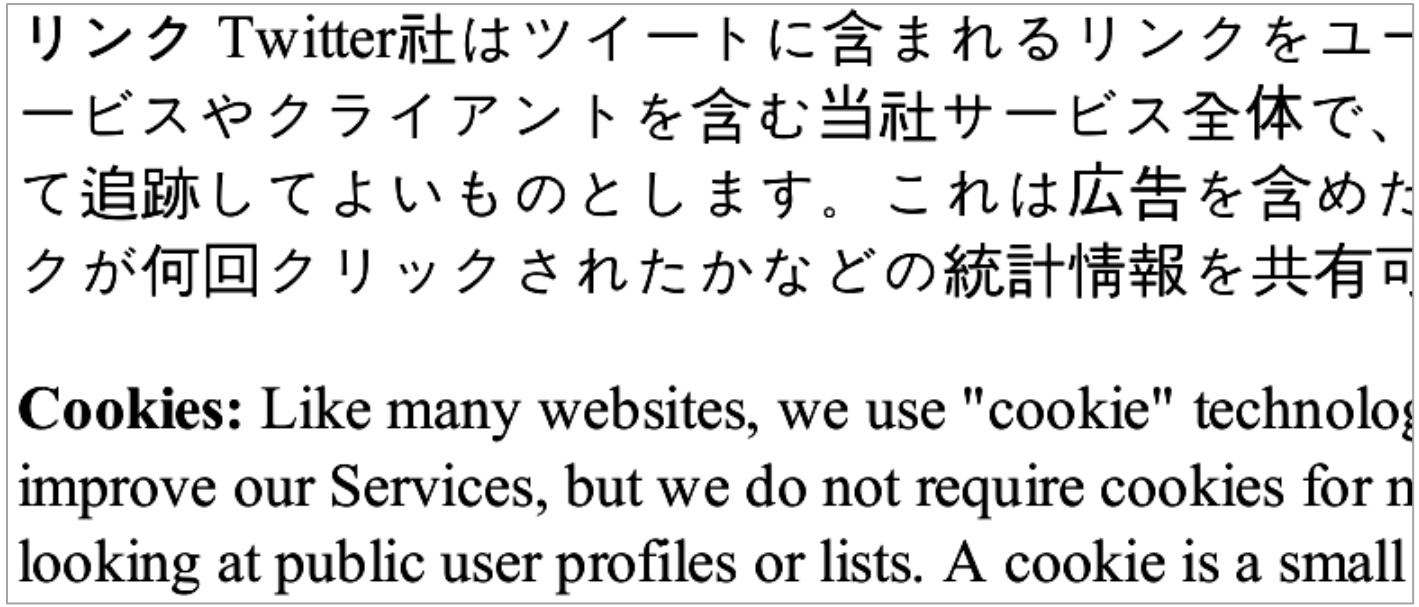
New content:

Internationalization

Translating privacy



Translating privacy



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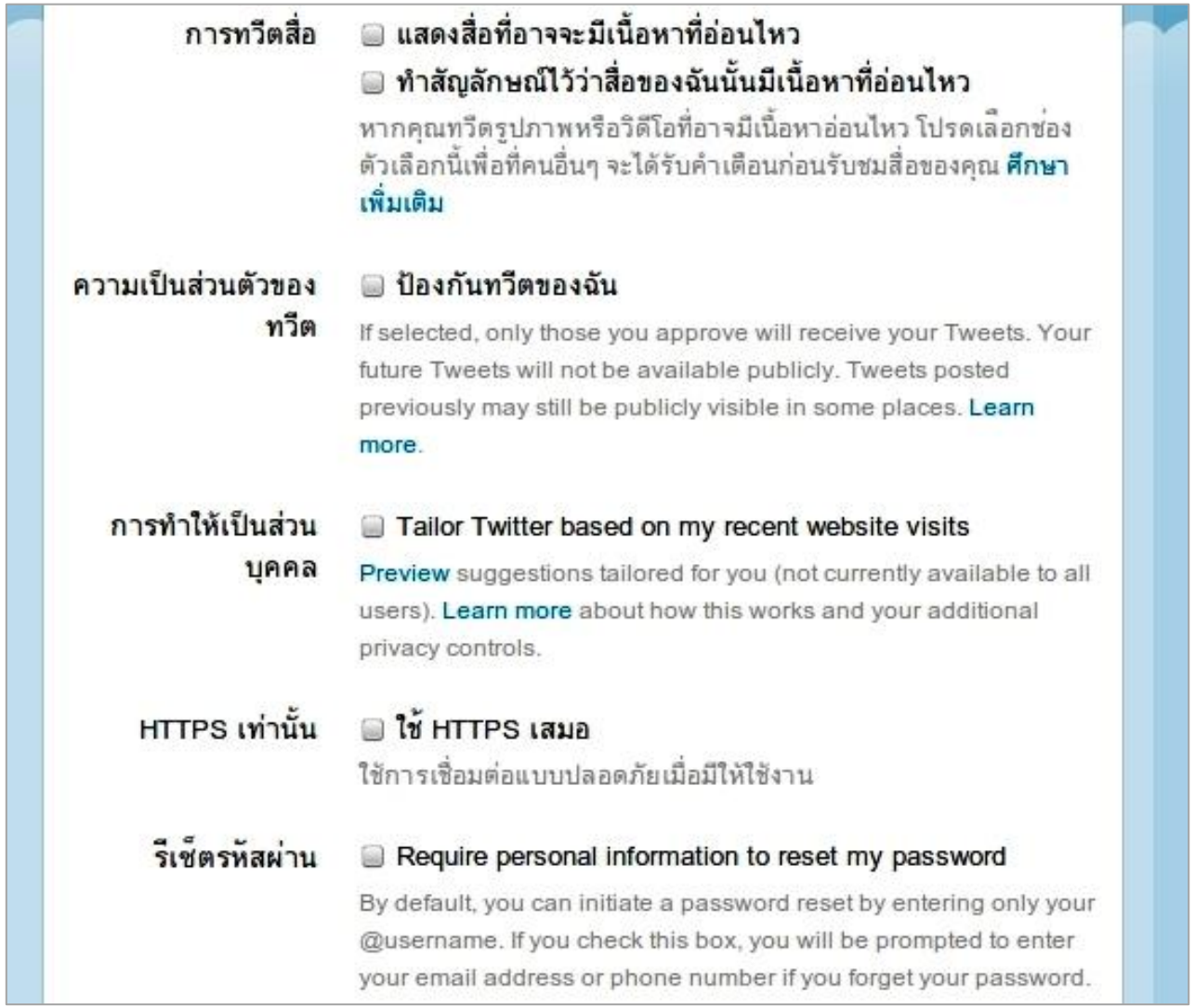


การทวีตสื่อ

- แสดงสื่อที่อาจจะมีเนื้อหาที่อ่อนไหว
- ทำสัญลักษณ์ไว้ว่าสื่อของฉันนั้นมีเนื้อหาที่อ่อนไหว

หากคุณทวีตรูปภาพหรือวิดีโอที่อาจมีเนื้อหาอ่อนไหว โปรดเลือกช่องตัวเลือกนี้เพื่อที่คนอื่นๆ จะได้รับคำเตือนก่อนรับชมสื่อของคุณ **ศึกษาเพิ่มเติม**

ความเป็นส่วนตัวของทวีต

- ป้องกันทวีตของฉัน

If selected, only those you approve will receive your Tweets. Your future Tweets will not be available publicly. Tweets posted previously may still be publicly visible in some places. Learn more.

การทำให้เป็นส่วนบุคคล

- Tailor Twitter based on my recent website visits

Preview suggestions tailored for you (not currently available to all users). Learn more about how this works and your additional privacy controls.

HTTPS เท่านั้น

- ใช้ HTTPS เสมอ

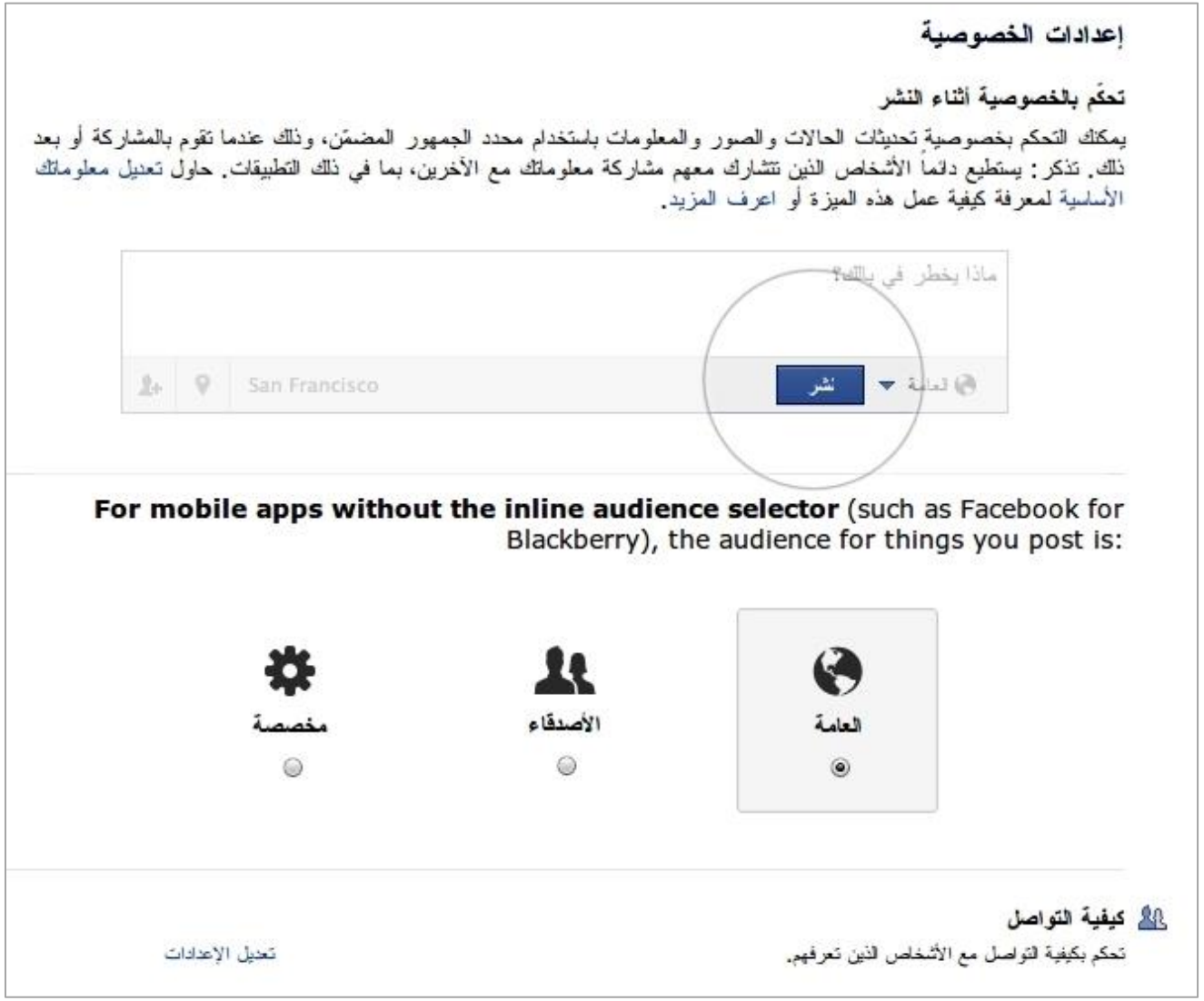
ใช้การเชื่อมต่อแบบปลอดภัยเมื่อมีให้ใช้งาน

รีเซ็ตรหัสผ่าน

- Require personal information to reset my password

By default, you can initiate a password reset by entering only your @username. If you check this box, you will be prompted to enter your email address or phone number if you forget your password.

Translating privacy



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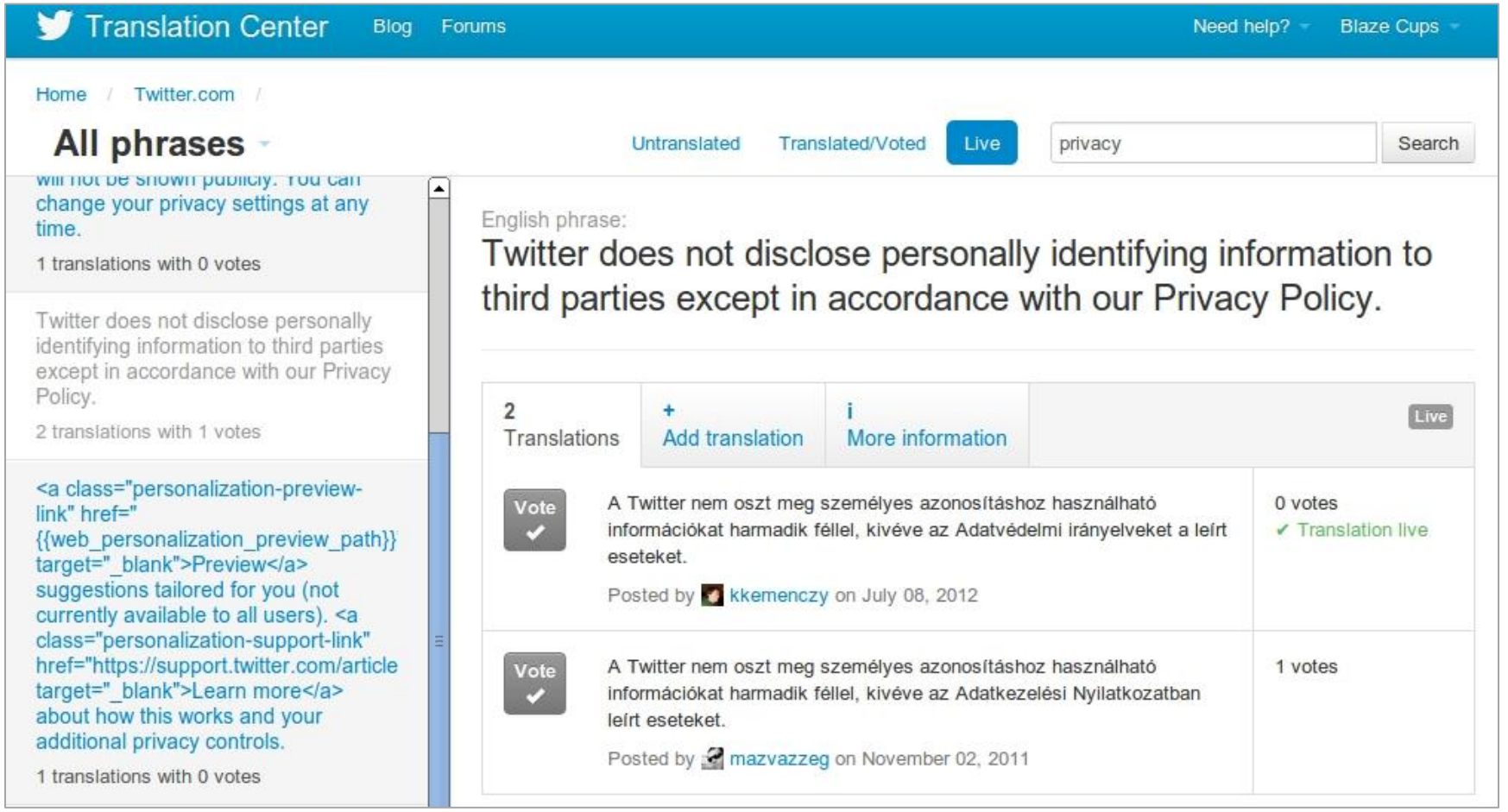

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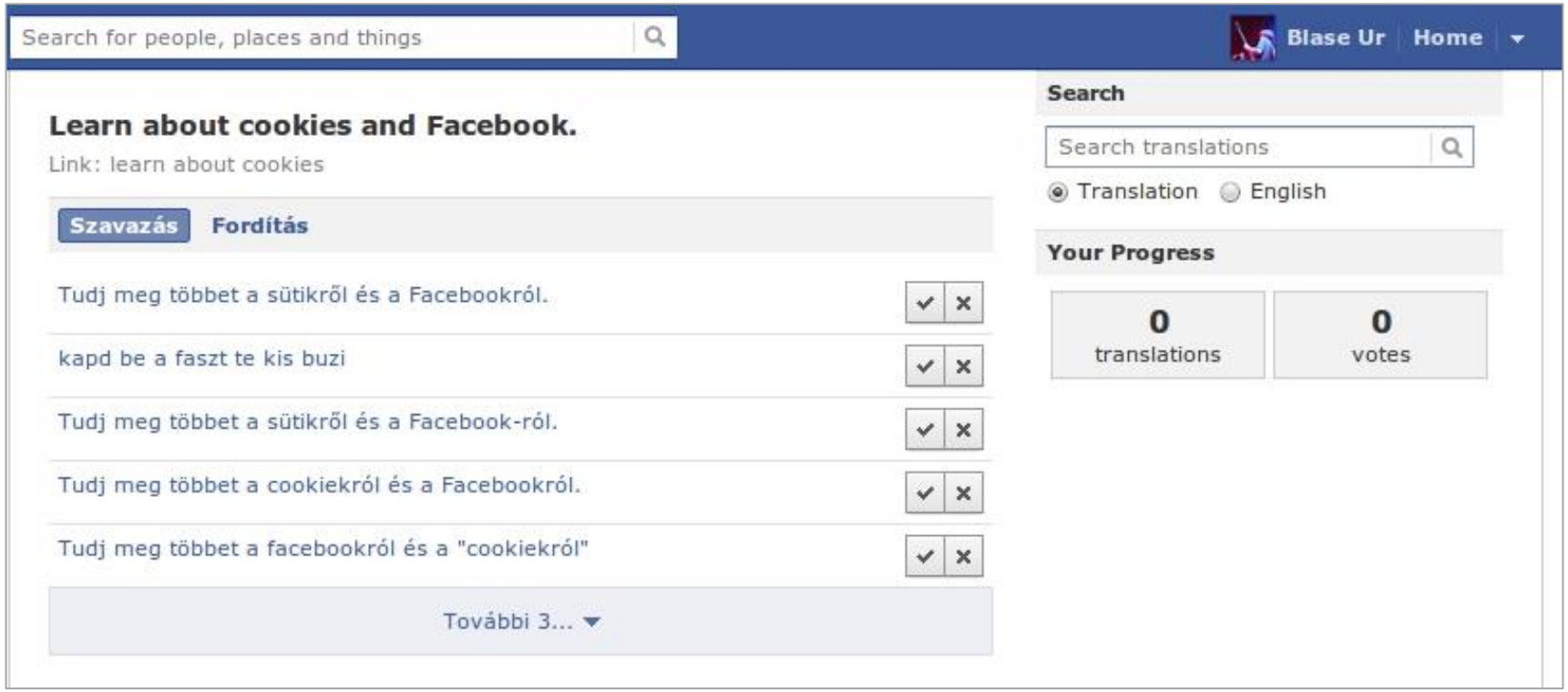

Representing Text: ASCII (7 bits)

ASCII TABLE

Decimal	Hex	Char	Decimal	Hex	Char	Decimal	Hex	Char	Decimal	Hex	Char
0	0	[NULL]	32	20	[SPACE]	64	40	@	96	60	`
1	1	[START OF HEADING]	33	21	!	65	41	A	97	61	a
2	2	[START OF TEXT]	34	22	"	66	42	B	98	62	b
3	3	[END OF TEXT]	35	23	#	67	43	C	99	63	c
4	4	[END OF TRANSMISSION]	36	24	$	68	44	D	100	64	d
5	5	[ENQUIRY]	37	25	%	69	45	E	101	65	e
6	6	[ACKNOWLEDGE]	38	26	&	70	46	F	102	66	f
7	7	[BELL]	39	27	'	71	47	G	103	67	g
8	8	[BACKSPACE]	40	28	(	72	48	H	104	68	h
9	9	[HORIZONTAL TAB]	41	29	)	73	49	I	105	69	i
10	A	[LINE FEED]	42	2A	*	74	4A	J	106	6A	j
11	B	[VERTICAL TAB]	43	2B	+	75	4B	K	107	6B	k
12	C	[FORM FEED]	44	2C	,	76	4C	L	108	6C	l
13	D	[CARRIAGE RETURN]	45	2D	-	77	4D	M	109	6D	m
14	E	[SHIFT OUT]	46	2E	.	78	4E	N	110	6E	n
15	F	[SHIFT IN]	47	2F	/	79	4F	O	111	6F	o
16	10	[DATA LINK ESCAPE]	48	30	0	80	50	P	112	70	p
17	11	[DEVICE CONTROL 1]	49	31	1	81	51	Q	113	71	q
18	12	[DEVICE CONTROL 2]	50	32	2	82	52	R	114	72	r
19	13	[DEVICE CONTROL 3]	51	33	3	83	53	S	115	73	s
20	14	[DEVICE CONTROL 4]	52	34	4	84	54	T	116	74	t
21	15	[NEGATIVE ACKNOWLEDGE]	53	35	5	85	55	U	117	75	u
22	16	[SYNCHRONOUS IDLE]	54	36	6	86	56	V	118	76	v
23	17	[ENG OF TRANS. BLOCK]	55	37	7	87	57	W	119	77	w
24	18	[CANCEL]	56	38	8	88	58	X	120	78	x
25	19	[END OF MEDIUM]	57	39	9	89	59	Y	121	79	y
26	1A	[SUBSTITUTE]	58	3A	:	90	5A	Z	122	7A	z
27	1B	[ESCAPE]	59	3B	;	91	5B	[	123	7B	{
28	1C	[FILE SEPARATOR]	60	3C	<	92	5C	\	124	7C	|
29	1D	[GROUP SEPARATOR]	61	3D	=	93	5D	]	125	7D	}
30	1E	[RECORD SEPARATOR]	62	3E	>	94	5E	^	126	7E	~
31	1F	[UNIT SEPARATOR]	63	3F	?	95	5F	_	127	7F	[DEL]

https://simple.wikipedia.org/wiki/ASCII

Extended ASCII (8 bits)

128	Ç	144	É	160	á	176	▒	193	┴	209	╤	225	ß	241	±
129	ü	145	æ	161	í	177	▒	194	┬	210	╥	226	Γ	242	≥
130	é	146	Æ	162	ó	178	▓	195	├	211	╙	227	π	243	≤
131	â	147	ô	163	ú	179	|	196	─	212	╘	228	Σ	244	⌠
132	ä	148	ö	164	ñ	180	┤	197	┼	213	╒	229	σ	245	⌡
133	à	149	ò	165	Ñ	181	╡	198	╞	214	╓	230	µ	246	÷
134	å	150	û	166	ª	182	╢	199	╟	215	╫	231	τ	247	≈
135	ç	151	ù	167	º	183	╖	200	╚	216	╪	232	Φ	248	°
136	ê	152	ÿ	168	¿	184	╕	201	╔	217	┘	233	Θ	249	∙
137	ë	153	Ö	169	⌐	185	╣	202	╩	218	┌	234	Ω	250	·
138	è	154	Ü	170	¬	186	║	203	╦	219	█	235	δ	251	√
139	ï	156	£	171	½	187	╗	204	╠	220	▄	236	∞	252	⁻
140	î	157	¥	172	¼	188	╝	205	═	221	▌	237	φ	253	²
141	ì	158	₧	173	¡	189	╜	206	╬	222	▐	238	ε	254	■
142	Ä	159	ƒ	174	«	190	╛	207	╧	223	▀	239	∩	255	
143	Å	192	└	175	»	191	┐	208	╨	224	α	240	≡		

https://www.webopedia.com/definitions/extended-ascii/

UTF-8

- Variable-width character encoding
  - https://en.wikipedia.org/wiki/UTF-8

New content:

Availability

Availability

- Are you assuming a technology that people don’t have?
  - COVID-19 contact tracing

Mobile Money

Mobile Money